

# QUANTUM DOT VERTICAL CAVITY SURFACE EMITTING LASER

## ABSTRACT OF THE DISCLOSURE

[00112] A quantum dot vertical cavity surface-emitting laser has a low threshold gain. Top and bottom mirrors have a low mirror loss, with at least one of the mirrors being laterally oxidized to form semiconductor/oxide mirror pairs. In one embodiment, mode control layers reduce the optical field intensity in contact layers, reducing optical absorption. In one embodiment, delamination features are included to inhibit the tendency of laterally oxidized mirrors from delaminating.